

**METHOD AND APPARATUS FOR PROTECTING AND COVERING THE HEAD
OF A GOLF CLUB**

FIELD OF THE INVENTION

- [01] The invention relates to a method and apparatus for protecting a complex geometric surface, and in particular to a semi-permanently protective covering affixed to the surfaces of the head of a golf club and the method of applying thereof.

BACKGROUND OF THE INVENTION

- [02] In the sport of golf, golfers often invest a significant amount of money in their golf clubs. Golf clubs are typically divided into four categories: irons, drivers or woods, wedges and putters. The woods or drivers are used when the golfer drives off of the tee box and for long fairways shots. Although most drivers are now composed of metal or composite materials, they were originally made from wood and the name "woods" is still used today. These woods are typically the most expensive type of club costing approximately \$100.00 to \$800.00 for an individual club; however, putters and individually specialty clubs such as pitching and sand wedges may also cost as much as a driver.
- [03] During a golfer's playing career, he will own more than one set of golf clubs. This is especially true with the increasing popularity of golf with children, and young adults and the rapidly changing club design technology.. As the young golfer grows in height and gains strength, he may need longer clubs or ones with more or less stiffness to match his golf swing. Furthermore, club manufacturers develop many new club designs each year and many golfers prefer to have the latest designs of clubs. To find the proper fitting set of golf clubs, most golfers will test different types and styles of clubs. Many sport stores shops that sell golf clubs and all professional golf shops have an area either in the store with artificial turf or a grassy area outside

where the customer can take a few swings to get the feel of the club. Often, the sales assistant, local golf professional or trainer will observe the customer's swing to help recommend the proper type or club styles for the golfer to try and choose from. Further, the competition between golf equipment manufacturers is very intense. To get the golf clubs in the hands of the consumer, many manufacturers give, at no cost, resorts or golf courses demonstration or rental clubs for golfers to use or rent. The manufacturers anticipate that the consumer may become interested in buying clubs similar those he rented at the golf course. As such, the manufacturer would prefer that the clubs stay in their pristine condition for each golfer, a potential buyer, to try or test.

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- [04] During the testing of golf clubs, a club may be scuffed or damaged. For example, the golfer may strike the ball with a driver in such a way that the ball goes over the top of the club, glancing off the top, or crown. Also, the inexperienced golfer may miss the ball and strike the ground or the club may rotate in the golfer's hands such that not the ball contacts the non-striking surfaces of the club head instead of the clubface. This is especially true with the woods because they are heavier than the irons, wedges and putters. These miss-hits and even strong hits to the face, striking surface of the club, often scuff or scratches club surface or finish. Similarly, many golf shops allow a golfer to play a round of golf with a test driver or a complete set of test clubs that the golfer may be interested in purchasing. Due to the fact that golfers of varying skill levels will try these "trial" clubs, the clubs, especially the drivers, are often returned to the golf shop with nicks, scratches and dirt in the engraved surfaces.
- [05] The golf shop will typically clean the clubs to remove any dirt and attempt to buff out scratches on the club heads before returning them to the showroom floor. It is of common practice to sell used rental and test clubs at the end of each golf season. Although these trial clubs are fairly new, any scratches and nicks on clubs such as the woods, wedges or putters may distract from the ornate appearance of the clubs and may deter a potential buyer from purchasing that style or brand of clubs. Some woods can be refinished, but this is often cost prohibited and lowers the profit for the golf

shop. A set of "lightly" used clubs can be devalued by up to one-third of its selling price due to nicks and marks on the clubs. Likewise, the golf manufacturer prefers that their clubs are placed on sale in their best condition, free from scuffmarks and nicks. Therefore, golf equipment manufacturers and retail stores desire a method for protecting golf club heads while the clubs are being tested or used.

[06] Golfers typically care for their clubs by cleaning them and may have the shafts and heads of the clubs replaced when they become damaged. Even experienced golfers may incorrectly hit the ball such that the surface not intended for striking the ball (toe, heel or top of the head) strikes the ball instead of the clubface. This is very common when the golfer uses a new club or when the golfer is attempting to hit the ball at or near the maximum power the golfer is able to deliver. Furthermore, the club head may be damaged if the head inadvertently strikes a hazard such as a tree or a rock. If a non-face surface of the club head strikes the hazard or ball with enough force, it may leave a scar, scratch or scuff on the non-striking surface. Not only are these unwanted marks on the club head visually unappealing to the golfer, the marks may distract the golfer during the golfer's swing. If these marks distract the golfer such that it impedes on the golfer's swing, the marks may render the club useless to the golfer.

[07] In addition, because woods or drivers are typically expensive, a golfer may trade in a driver to the retailer for resale as partial payment for the new golf club. Scars and scuffs on the club heads may reduce the trade-in value of the driver. Most golfers utilize fabric or leather covers on the head of their clubs, typically the woods, but covers are also available for putters, wedges and even irons to protect them from scratches while the clubs are not in use. However, these covers must be removed before using the club and do not protect the club during a swing. Therefore, golfers who trade-in or resell their golf clubs desire a method for protecting the club heads while golfing. Likewise, many golf courses that rent clubs try to keep their clubs in top shape for the next golfer and also desire a method for protecting their clubs while they are being used.

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- [08] Many golf clubs display markings on the tops of the club head for aiding the golfer in addressing the ball for proper alignment with the clubface. When "teeing off", the golfer places the ball on a "tee" which helps hold the ball above the grass in the tee box. Next, the golfer may position the face of the club next to the ball using the markings on the top of the club head to align the ball to with the clubface. Golfers, especially inexperienced ones, often find this process of consistently addressing the ball and striking the ball in the same location on the clubface very difficult. As such, the inexperienced golfer may rely on these markings on the top of the club to gain consistency in the their swing. However, not all makers of drivers have these alignment markings on the top of the club or the golfer may prefer to use a different location the club head as a reference. Likewise, other clubs such as pitching heads and putters may also lack alignment markings or the golfer may desire the marking in a different location on the club. Therefore, the ability to provide custom markings on the top of the club head that can be calibrated for the individual golfer is also desired.
- [09] Another issue encountered with the use of demonstration clubs is the ability to mark the clubs for identification by the pro shop or clubhouse as demonstrator or rental house clubs. Many golf courses which rent clubs use paints or colored tapes on the shafts of the clubs to help them identify their clubs and to deter theft. Conversely, the pro shop wants to be able to quickly identify their test clubs, but do not want to distract from the appearance of the club. Also, it is advantageous to have a method for identifying and distinguishing between the various drivers the golfer is testing to help the golfer remember which club he or she prefers. In particular, it would be beneficial to have a method for placing a logo or text on the top of the club without defacing or damaging the top of the club head.
- [10] Professional golfers who have endorsements contracts with various companies are often required to display a company logo on their clothing and golf equipment such as their golf bags, umbrellas and towels. Many amateur golfers often purchase golf products endorsed by their favorite professional golfers. In the business world, golf equipment displaying company logos is often given to potential customers. As well,

many golfers often express their individual style with whimsical or ornate golf club covers and golf bags. Some golfers have their drivers decorated with custom paints. As such, a golfer may desire a means of customize their clubs with a semi-permanent covering that may be changed when the golfer desires a new look or as it wears. For example, the golfer may desire to place his initials, the name of his favorite golf course, or the date of a "hole-in-one" on the top of the club head. Alternatively, a golfer may find the marks on the top of the club by the manufacturer distracting and may desire a method for covering the markings.

- [11] In protecting the head of a golf club, it is ideal to have a covering that is removable. As the covering wears or becomes damaged, it is of no consequence as the cover can be removed and replaced. When a club is traded in or sold as a used club, the seller would like the club to look as new as possible, and removing a worn cover and replacing it with a new one, will enhance the club's appeal. This is particularly so if the previous owner had personalized the cover or club head in some manner.

BRIEF SUMMARY OF THE INVENTION

- [12] In accordance with one aspect of the present invention, a protective golf club covering is disclosed for protecting the non-striking surfaces of the head of a golf club. Preferably, the golf club is composed of metal, a composite material such as carbon/epoxy, Kevlar/epoxy or fiberglass, or in some cases wood. The protective covering is a resilient urethane material such as Scotchcal™, a paint protection film, manufactured by Minnesota Mining and Manufacturing Company (3M) or similar material produced by Avery Dennison, Tyco or others.
- [13] In accordance the present invention, the protective covering prevents the scarring of the non-striking surfaces of the head of the golf club that may occur from miss hitting a ball or striking of hazards on the golf course such as rocks, trees and other debris. The protective covering also protects the club from dirt and helps protect the markings on non-striking surfaces of the club.

[14] In one embodiment of the present invention, the protective covering is clear to allow the club to appear as manufactured without changing the appearance of the head of the golf club. In another embodiment, the cover is opaque such that it may be used to mask markings on the non-striking surfaces club head that the golfer finds distracting or to change the appearance such as the color of the club head. In another embodiment of the invention, the covering is clear and contains a logo or other markings. The markings may be embossed in the material such that the outline of marking is seen when placed on the golf club head, or alternatively, the marking may be made by dyes or pigments placed on the adhesion side of the covering to protect the markings from damage during the use of the golf club. For example, these markings may be the logo of a manufacturer, sponsor, golf course, or text such as the golfer's name or initials.

[15] In accordance with the present invention, a method of applying the protective cover is disclosed. A method of applying and trimming of the protective covering manufactured by 3M, Avery Dennison, Tyco or others to the surfaces of a golf club is disclosed.

BRIEF DESCRIPTION OF THE DRAWINGS

[16] Figure 1a is a perspective view of a head of a golf club with a protective covering placed on the crown of the head of the golf club;

[17] Figure 1b is an exploded view of a head of a golf club with a protective covering having a reference markings for properly addressing the golf ball and a logo;

[18] Figure 2a is a perspective view illustrating a standing position for holding a golf club during the application process of applying a protective covering;

[19] Figure 2b is a perspective view illustrating an alternative sitting position for holding a golf club during the application process of a protective covering;

- [20] Figure 3 is a top perspective view showing the placing of the protective covering with the backing material removed and positioning the covering's rounded corner on the crown of the club head where a shaft mates with the club;
- [21] Figure 4 is a top perspective view showing the use of a thumb to anchor The protective covering near the shaft of the club head while stretching the material of the protective covering and aligning an edge to the club face;
- [22] Figure 5a is a top perspective view of a golf club head illustrating the use of a thumb to smooth the protective covering along the leading edge of the face of golf club;
- [23] Figure 5b is a top perspective view showing of a golf club head with the protective covering applied to the leading edge of the club face while stretching the protective covering at top of the club head;
- [24] Figure 6 is a top plan view of a club head illustrating the stretching of the protective covering over the crown of the club;
- [25] Figure 7 is a perspective view showing the stretching of the protective covering over the toe of a club head;
- [26] Figure 8 is a top plan view of the golf club head illustrating the stretching of the protective covering over the heel of a club head;
- [27] Figure 9a is a perspective view of the golf club head positioned at eye level showing the stretching of the protective covering over the edge of a club head before placing the material to the bottom of the club;
- [28] Figure 9b is a perspective view illustrating a club head positioned at eye level while sitting and the stretching of the protective covering over the edge of the club head;
and
- [29] Figure 10 is a perspective view showing the trimming of the protective covering at the toe of a club head with a razor knife.

DETAILED DESCRIPTION OF THE INVENTION

- [30] The present invention is a protective covering applied to the head of a golf club for protecting the surfaces of the golf club which may also be used to display functional or decorative indicia, and a method for applying the protective covering.
- [31] Referring now to Figs. 1a and 1b, a golf club 10 such as a driver is shown having a protective covering 12 placed on the crown 14 of the head 16 of golf club 10 with a shaft 18. The protective covering 12 may be placed on any surface of head 16 of golf club 10 to help protect the surface from scratches, scuffs and dirt. Alternatively, protective covering 12 may display a reference marking 20 for using by the golfer to align the club with the ball. Likewise, protective covering 12 may display a logo, decorative or identifying indicia 22.
- [32] Protective covering 12 may be used on crown 14 of golf club head 16 to protect the surface of crown 14 from scuffs or scratches which may occur when the golfer miss hits the golf ball such that the ball travels over crown 14 instead of striking the club face 24. In the preferred embodiment, protective covering 12 is a light-weight urethane material with an adhesive applied to one side and manufactured by Minnesota Mining and Manufacturing (3M) and is sometimes marketed as Rockguard. Rockguard has been successfully proven to reduce the impact damage of the substrate that the Rockguard covers. However, similar urethane materials are available that would also assist in prevent damage to club head 16. The urethane material must be thin with the ability of two-way stretch to allow for a smooth application to club head 16.
- [33] Protective covering 12 is of negligible weight such that its presence on club head 16 does not affect the golfer's swing. Alternatively, protective covering 12 may be used on the bottom of club head 16 (not shown) or club face 24 to protect the club from scratches and scuffs while a potential buyer is testing a club. The presence of

protective covering 12 on club face 24 may affect the path of the ball because protective covering 12 has a tendency to grip the ball when club face 24 strikes the ball at the bottom of the golfer's swing. Protective covering 12 may wear and become torn during play; however, its presence protects club head 16. The worn protective covering 12 may be removed to reveal a clean, pristine club head 16.

- [34] In an alternative embodiment of the present invention, protective covering 12 may also be used to change the appearance of club head 16. Pigment may be added to the adhesive side of protective covering 12 such that the protective covering 12 is opaque. The urethane material of protective covering 12 protects both the pigment golf club 10. Decorative patterns such as cartoon characters or a golf course's insignia as well as reference markings 20 and other indicia 22 may be placed on protective covering 12.
- [35] Turning to the application of protective covering 12, both protective covering 12 and golf club 10 must be held during application. Protective covering 12 may be applied in a standing position 25, see Fig. 2a, utilizing a waist high table 26 and a short stool or step 28 may be used to raise club head 16 to eye level when placed upside down on the end of shaft 18. Alternatively, protective covering 12 may be applied in a sitting position 30 as shown in Fig. 2b with the aid of table 26.
- [36] The application of protective covering 12 to golf club 10 will be described using the example of applying protective covering 12 to crown 14 of a right-handed club head 16 of a driver. Alternatively, protective covering 12 may be applied to the bottom of club head 16, club face 24 and the other non-striking surfaces of club head 16 using the same procedure. Protective covering 12 must be applied in a working temperature of at least 65° Fahrenheit. At temperatures below 65°F, the adhesive may not bond with the surface.
- [37] First, the surface protective covering 12 will be applied to must be free of dirt, grass stains and wax. Any household cleaner may be used; however, after cleaning the surface, in this example crown 14 of club head 16, with a household cleaner, the

surface must be cleaned a second time using isopropyl alcohol (70% solution), otherwise know as "rubbing alcohol" which may be purchased at the local grocery or drug store. Likewise, the applicators hands must also be clean and free from dirt and oils. Place club head 16 on table 26 and support shaft 18 with the applicator's shoulder as illustrated in Fig. 2a.

- [38] Next, remove the backing material from protective covering 12 and place the semi-circular shaped corner 32 (see Figs. 1 a and b) to crown 14 where shaft 18 meet as shown in Fig. 3. While holding the remainder of protective covering 12 away from the surface of crown 14, lightly mist crown 14 with the isopropyl alcohol such that only very fine beads are on the surface for application. Too much alcohol on the application surface will make the surface slippery and may prevent protective covering 12 from adhering to crown 14. Conversely, inadequate alcohol on crown 14 may result in dry areas that remain visible after protective covering 12 is applied. Also note that, in high temperature conditions, the alcohol may evaporate quickly and application may require a heavier mist of alcohol on the application surface. Note that protective covering 12 may be applied without the use of the alcohol. In cases where the covering is to be applied to an uneven surface such as an iron, putter or wedge with multiple grooves or engraving and unpainted surfaces, the covering may be applied dry. Furthermore, these irons may have softer coatings such as gold plating that may be protected from nicks and scratches by covering with protective covering 12. However, to aid in the application and to remove air bubbles for a transparent finish, alcohol is preferred.

- [39] As shown in Fig. 4, use a thumb 33 to firmly press and anchor semi-circular shaped corner 32 on crown 14 and pull protective covering 12 across crown 14 aligning the edge of protective covering 12 with the leading edge 34 of club face 24. Do not let protective covering 12 overlap leading edge 34 and bond with club face 24 as this may cause protective covering 12 to peel away from crown 14 during application or later during use of golf club 10. Using thumb 33 to anchor protective covering 12, rub protective covering 12 with a finger or thumb at the leading edge 34 while

stretching protective covering 12 to adhere protective covering 12 to crown 14 as shown in Figs 5 a and b. Continue rubbing protective covering 12 at leading edge 34 until the alcohol and all air bubbles are removed from underneath protective covering 12.

- [40] Place club head 16 on to club face 24 as shown in Fig. 6 and with thumbs 33, stretch protective covering 12 over crown 14 as shown to remove all air pockets and alcohol. Next, rotate club head 16 on to the bottom of the club 10 as shown in Fig. 7 and stretch and rub the protective covering 12 over the club toe 36. Rotate the club on to club toe 36 as shown in Fig. 8, stretch protective covering 12 and rub to remove the alcohol and any air bubbles.
- [41] Position golf club 10 at eye level by placing the top of shaft 18 on the floor if sitting or on stool 28 when in the standing position (see Figs. 2 a and b). Returning to protective covering 12, pull and stretch protective covering 12 over club toe 36 as illustrated in Figs. 9 a and b. Working from left to right, pull and stretch protective covering 12 over the edge of club toe 36, working approximately one inch of protective covering 12 at a time. While continually stretching protective covering 12, rub protective covering 12 onto the bottom of the club head 16 in preparation for trimming.
- [42] Using a razor knife 40, gently score protective covering 12 along club toe 36 and along the perimeter of crown 14 to club heel 38. Attempt to cut through approximately half of the thickness of protective covering 12. At the last 0.125 inch of protective covering 12 at club heel 38, cut through the entire thickness of protective covering 12. Starting at this through-cut, gently peel excess protective covering 12 from club head 16 using thumb 33 to apply pressure to protective covering 12 along the cut.
- [43] As discussed above, protective covering 12 may be clear as to allow any manufacturers indicia 22 on the applied-to surface

- [44] Protective covering 12 protects the underlying surface of club head 16 and may be removed after it becomes worn or is no longer desire by lifting of the edge and peeling back. Alternatively, a hot air gun or blow drier may be used to loosen protective covering 12 from the surface of club head 16.
- [45] While the invention has been described with respect to specific examples including presently preferred modes of carrying out the invention, those skilled in the art will appreciate that there are numerous variations and permutations of the above described systems and techniques that fall within the spirit and scope of the invention as set forth in the appended claims.